

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 5427 (1969): Honey Extractor, Radial Type [FAD 3: Apiary Industry]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



Indian Standard
SPECIFICATION FOR
HONEY EXTRACTOR, RADIAL TYPE

UDC 638.163.4



© Copyright 1970

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

Indian Standard

SPECIFICATION FOR HONEY EXTRACTOR, RADIAL TYPE

Apiary Industry Sectional Committee, AFDC 11

Chairman

DR A. S. ATWAL

Representing

Government of Punjab

Members

SHRI V. P. ANANTANARAYANAN

Directorate of Marketing & Inspection (Ministry of Food, Agriculture, Community Development & Co-operation), Nagpur

SHRI K. L. CHATTERJEE (*Alternate*)

*DR O. S. BINDRA

Entomologist, Government of Haryana

SHRI P. L. CHATURVEDI

Government Beekeeping Station, Jeolikote

SHRI R. C. TALWAR (*Alternate*)

JOINT DIRECTOR OF INDUSTRIES
& COMMERCE (CD & NES)

Department of Industries & Commerce, Government of Mysore

APICULTURAL DEVELOPMENT

OFFICER (*Alternate*)

SHRI S. N. MITRA

Central Committee for Food Standards (Ministry of Health, Family Planning, Works, Housing & Urban Development)

SHRI D. S. CHADHA (*Alternate*)

DR N. C. PANT

Indian Agricultural Research Institute, New Delhi

SHRI B. A. POOVIAH

Coorg Honey and Wax Producers' Co-operative Marketing Society Ltd, Virajpet

SHRI B. P. BOPALAH (*Alternate*)

PRESIDENT

Martandam Bee-keepers' Co-operative Society Ltd, Martandam

SECRETARY (*Alternate*)

SHRI C. L. SAH THULGHARIA

All India Beekeepers' Association, Poona

SHRI K. R. VINCHURKAR (*Alternate*)

SHRI A. M. SHAH

Jammu & Kashmir Khadi and Village Industries Board, Srinagar

SHRI P. L. SHARMA

Entomologist, Government of Himachal Pradesh

SHRI S. G. SHENDE

Khadi & Village Industries Commission, Bombay

SHRI S. G. SHENDE

Maharashtra State Khadi & Village Industries Board, Bombay

DR M. SRINIVASAN

Central Food Technological Research Institute (CSIR), Mysore

DR L. V. L. SASTRY (*Alternate*)

DR HARI BHAGWAN,

Director General, ISI (*Ex-officio Member*)

Deputy Director (Agri & Food)

Secretary

SHRI S. K. SUD

Assistant Director (Agri & Food), ISI

(*Continued on page 2*)

*Dr O. S. Bindra is also alternate to Dr A. S. Atwal.

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

(Continued from page 1)

Beekeeping Equipment Subcommittee, AFDC 11:2

Convener

SHRI S. G. SHENDE

Representing

Khadi & Village Industries Commission, Bombay

Members

SHRI P. L. CHATURVEDI

SHRI B. M. MUTHAPA

SHRI C. L. SAH THULGHARIA

SHRI P. P. ANAND (*Alternate*)

SHRI A. M. SHAH

SHRI P. L. SHARMA

SHRI S. G. SHENDE

SHRI C. V. THAKAR

Government Beekeeping Station, Jeolikote

Department of Industries & Commerce, Government
of Mysore

All India Beekeepers' Association, Poona

Jammu & Kashmir Khadi and Village Industries
Board, Srinagar

Entomologist, Government of Himachal Pradesh

Maharashtra State Khadi & Village Industries Board,
Bombay

Khadi & Village Industries Commission, Bombay

Indian Standard

SPECIFICATION FOR HONEY EXTRACTOR, RADIAL TYPE

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 17 October 1969, after the draft finalized by the Apiary Industry Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Honey extractors enable bee-keepers to extract the maximum quantity of honey from the frames. There are many kinds of honey extractors in use; they range from simple hand-driven types used in small apiaries to the complex power-driven types used in large bee-keeping organizations. This standard is intended to give general requirements for a hand-driven honey extractor of the radial type. Two sizes are prescribed—one to fit ten super frames of Type A and the other to fit ten super frames of Type B beehives (*see* IS:1515-1969*). This extractor could also be used for other frames which would fit in the rotating frame holder of the extractor.

0.3 'Indian Standard specification for honey extractor, tangential type' (IS:1736-1960) has already been published for small scale bee-keepers. This standard is being issued keeping in view the increasing usage of radial type honey extractor in apiary industry. It is hoped that this standard would help in the fabrication of the radial type extractor of quality generally acceptable to the consumers.

0.4 This standard contains clauses 5.1, 5.2.3 and a note under Fig. 1 which call for agreement between the purchaser and the supplier.

0.5 In the preparation of this standard, considerable assistance has been derived from the information supplied by the Central Bee Research Institute, Poona, directorate of Beekeeping, Khadi and Village Industries Commission, Bombay.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Specification for beehives (*first revision*).

†Rules for rounding off numerical values (*revised*).

1. SCOPE

1.1 This standard prescribes the requirements for honey extractors of the radial type, used for extracting honey centrifugally from the frames. This standard also includes a typical design of the honey extractors of radial type.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 Rotating Frame Holder—A device which holds super frames in place while extracting honey (*see* 5.2) and rotates around a central shaft.

2.2 Super Frame—A frame which has a depth less than that of the brood frame and in which surplus honey is stored (*see* IS: 1515-1969*).

3. SIZES

3.1 There shall be two sizes of the honey extractor, radial type, namely, Size 1 and Size 2. Size 1 honey extractor shall be used for all the three sizes of the super frames of Type A beehive while Size 2 shall be used for all the three sizes of the super frames of Type B beehive (*see* IS: 1515-1969*).

4. MATERIALS

4.1 The honey extractor, radial type, shall be constructed from galvanized steel sheets (*see* IS: 277-1962†).

4.1.1 The minimum thickness of the steel sheets used for fabricating the honey extractor shall not be less than 0.63 mm.

5. CONSTRUCTION

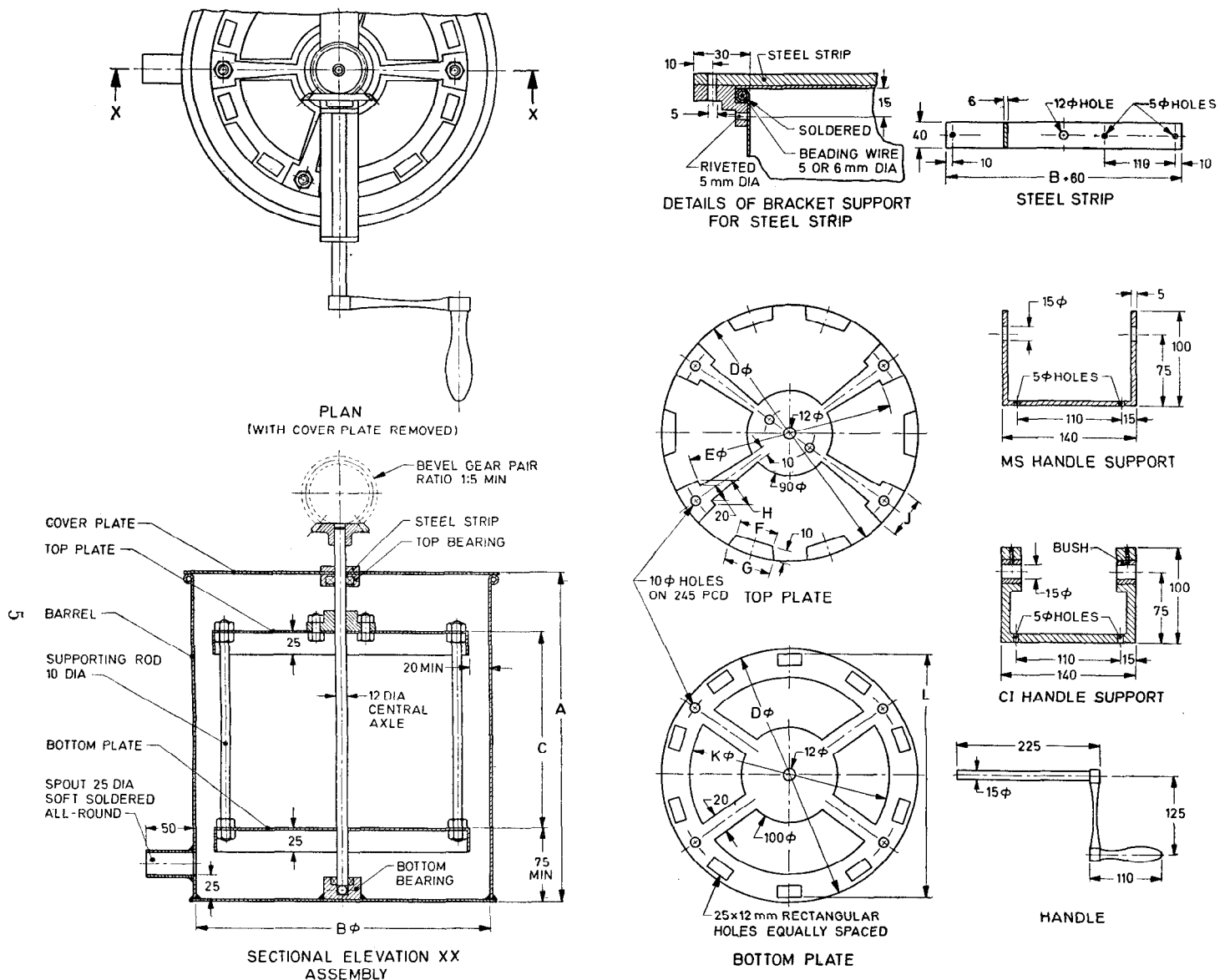
5.1 Outer Drum—The outer drum of the honey extractor shall be bent and soundly soft soldered (*see* IS: 193-1966‡) to form a cylinder. The bottom shall be soft soldered to the drum. The bottom may be flat or convex as agreed to between the purchaser and the supplier. If required by the purchaser, the bottom of the drum may be provided with a metal ring to avoid grinding off action. The rims of the barrel shall be rolled over and beaded with mild steel wire of 5 or 6 mm in diameter (*see* IS: 280-1962§ and Fig. 1). The beading shall be done in such a way that the wire used is not visible at any point. The joints of the wire shall be properly fused before the beading is done. All the joints and seams shall be soldered properly.

*Specification for beehives (*first revision*).

†Specification for galvanized steel sheets (plain and corrugated) (*revised*).

‡Specification for soft solder (*second revision*).

§Specification for mild steel wire for general engineering purposes (*revised*).



SIZE	A	B ϕ	C	D ϕ	E ϕ	F	G	H	J	K	L
1	350 \pm 2	310 \pm 2	225 \pm 2	270 \pm 2	220	42	50	32	42	210	260
2	450 \pm 2	350 \pm 2	295 \pm 2	310 \pm 2	260	54	62	44	62	250	300

All dimensions in millimetres.

NOTE — If required by the purchaser, the outlet (spout) may be fixed at the bottom of the outer drum.

FIG. 1 A TYPICAL HONEY EXTRACTOR, RADIAL TYPE

As in the Original Standard, this Page is Intentionally Left Blank

5.1.1 Outlet—The outlet or honey gate of the outer drum shall be fixed near the bottom in such a position as to enable the outer drum to be completely emptied with minimum tilting. It shall be 25 mm in diameter, 50 mm in length and shall be soft soldered to the outer drum properly. The outlet shall be provided with a stop cock.

5.2 Rotating Frame Holder (Inner Cage)—The rotating frame holder shall have circular top plate and bottom plate made of galvanized sheets. The thickness of the material shall be such that the plates shall not bend and be strong enough to hold the 10 frames with honey. The top and bottom plates shall be of one-piece construction with slots to hold the frames in position. The plates shall be held in position by firm mild steel rods and the central axle (*see* Fig. 1 and Fig. 2). The clearance all around the frame holder and the drum shall be not less than 20 mm; the clearance between the centre of the bottom plate and the bottom of outer drum shall not be less than 75 mm.

5.2.1 The openings in the top plate shall be such as to hold 10 super frames radially (*see* Fig. 1).

5.2.2 The bottom plate shall have 10 openings (*see* Fig. 1) to fit the lugs of 10 super frames.

5.2.3 The supporting rods of 10 mm diameter and threaded at both ends shall be fixed at the periphery of the top and bottom plates with nuts. The diameter of the central axle rod shall be 12 to 15 mm, as desired by the purchaser.

5.3 Bearings—There shall be two bearings, that is, top bearing and bottom bearing.

5.3.1 Bottom Bearing—A bush bearing shall be fixed to the bottom of the outer drum. The upper surface of the bush shall have a socket and steel balls to receive the axle rod. The bush shall be raised and a seal may be provided on the top of the bush to avoid mixing of greese or worn out parts of steel in honey.

5.3.2 Top Bearing—One ball bearing shall be fitted at the top of the top cover of the frame holder where the axle rod is passing through it.

5.4 Handle—The handle of the extractor shall be made in two pieces (*see* Fig. 1). The first piece of the handle shall be passed through the holes provided in the handle support (*see* 5.4.1 and Fig. 1), which in turn shall be fixed on a steel strip 6 mm thick and 40 mm wide (*see* Fig. 1) running across the outer drum. This mild steel strip carrying the handle support shall be supported by two steel brackets riveted to the outer drum. One end of the first piece of the handle shall have bevelled gear, which shall

engage with a bevelled pinion supported on the top of the central shaft. The gear ratio shall be not less than 1 : 5. The other end of the first piece of the handle shall be fixed to one end of the second piece of the handle. A wooden grip shall be provided for the other end of the second piece of handle. The handle shall be operated sideways.

5.4.1 The handle support shall be made of mild steel strip or cast iron (*see* Fig. 1) and fixed on the mild steel strip running across the barrel. It shall be provided with holes for the passage of the handle. If the handle support is made of cast iron, it shall be provided with lubricating holes on the top and the inside of the holes meant for the passage of the handle shall be provided with liners.

5.5 Cover — A cover made of the same material as of the outer drum, may be provided if required by the purchaser. The cover may be fitted with a wire gauge on the lower side so that it could be used as an uncapping tray.

6. SHAPE AND DIMENSIONS

6.1 The various parts of the two sizes of the honey extractor shall, as far as possible, conform to the shape and dimensions given in Fig. 1. A pictorial view of the rotating frame holder is given in Fig. 2.

7. WORKMANSHIP AND FINISH

7.1 The welding of the honey extractor shall be satisfactory in all respects. The weld shall not be porous or brittle. All welded joints shall be well dressed and smoothly finished. The soldering shall be neat and clean. The honey extractor shall be finished smooth all over. The honey extractor shall be devoid of cracks, seams, dents and other similar defects.

7.2 The parts which do not come in contact with honey shall be painted with suitable synthetic paint. Removable nuts shall be rust-proofed independently of painting.

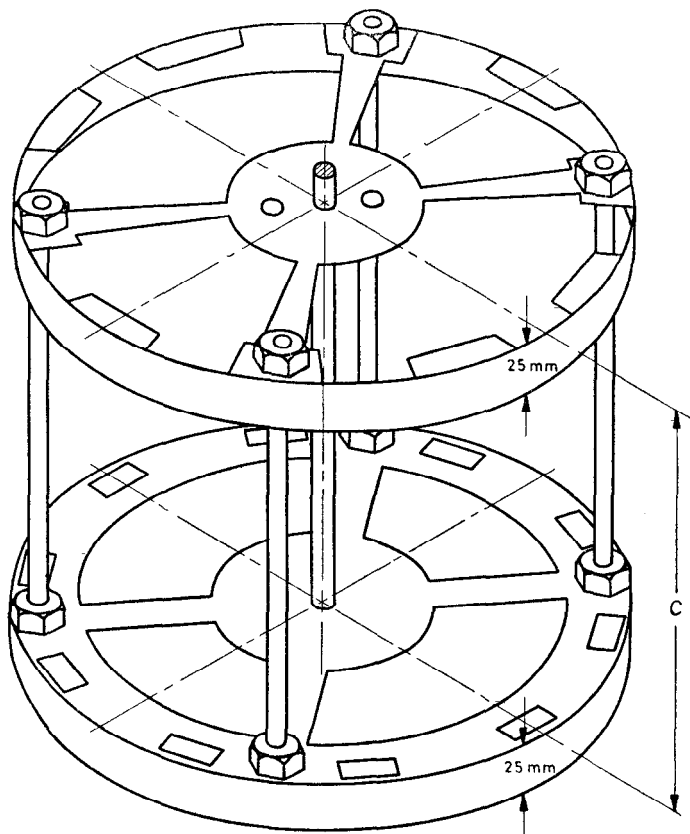
8. MARKING

8.1 The honey extractor shall be marked with the following particulars:

- a) Manufacturer's name, trade-mark or initials;
- b) Year of manufacture;
- c) Batch or code number; and
- d) Size of the extractor.

8.1.1 Each honey extractor may also be marked with ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers of processors, may be obtained from the Indian Standards Institution.



(For other dimensions, see table under Fig. 1)

FIG. 2 ROTATING FRAME HOLDER

INDIAN STANDARDS

ON

Apiary Industry

IS:						Rs
1504-1968	Commercial beeswax (<i>first revision</i> )	...	...	...	...	6·50
1515-1969	Beehives (<i>first revision</i>) (<i>under print</i> )	...	...	...	...	—
1735-1960	Hive stands ...	...	...	...	...	1·50
1736-1960	Honey extractor, tangential type ...	...	...	...	...	2·00
2072-1962	Comb foundation sheets ...	...	...	...	...	1·50
3891-1966	Layout for honey processing unit ...	...	...	...	...	1·50
3894-1966	Comb foundation mill ...	...	...	...	...	1·50
4941-1968	Honey ...	...	...	...	...	6·00
5426-1969	Travelling bees box (<i>under print</i> ) ...	...	...	...	...	—